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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,048

07/03/2003

Beohm-Rock Choi

6192.0300.US

4287

7590

10/05/2004

McGuire Woods  
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EXAMINER

DINH, TRINH VO

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/612,048	CHOI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Trinh Vo Dinh	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-28 is/are allowed.
- 6) ☒ Claim(s) 29-31 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/04(Figs.3,11)&07/03(Figs1-2,4-10) is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |



**DETAILED ACTION**

This is a response to amendment filed July 30, 2004. The drawing objection, the claim objection and the rejection of claims 1-32 under 35U.S.C. & 112 have been withdrawn in view of the amendment. Amended claims 1-28 have been indicated allowed. However, the Applicant's argument with respect to reference Okuda is not deemed to be persuasive. Therefore, the rejection of claims 29-31 retained and repeated for the following reasons.

***Drawings***

1. The drawings (Figs. 3 and 11) were received on July 30, 2004. These drawings are acceptable.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Okuda (USP 6,380,689 B1).

With respect to claim 29, Okuda discloses, in Fig. 7, an apparatus comprising  
a timing control part (21, 22, 24) receiving an image signal and a control signal of the  
image signal to output first and second timing signals and a power control signal,  
a column driving part (27) receiving the image signal and the first timing signal to output  
a data signal,



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a row driving part (26) receiving the second timing signal to output a scan signal;

a power supplying part (28) receiving the power control signal to apply a voltage in accordance with the power control signal,

a data line (Bn) transferring a data signal, and a scan line (Am) transferring a scan signal, a voltage applying line (C in Fig. 7) applying potential difference voltage applying line having first and second ends (two ends of power supply line C in Fig. 7), the first and second ends being electrically connected to the power supplying part (28), wherein power is supplied through the first and the second ends.

a switching device (31 in Fig. 10) having a first electrode (G of 31), a second electrode (S of 31), and a third electrode (D of 31), the first electrode being electrically connected to the data line (Bj), the second electrode being electrically connected to the scan line (Ai), the third electrode outputting the data signal,

an organic light emitting device (Ei,j in Fig. 10) having a fourth electrode (anode) and a fifth electrode (cathode), the fourth electrode being electrically connected to a reference voltage (to ground), amount of light generated from the organic light-emitting device having a relation to an amount of a density of a current applied to the organic light-emitting device.

a driving device (32) having a sixth electrode (S of 32), a seventh electrode (D of 32) and a eighth electrode (G of 32), the sixth electrode being electrically connected to the fifth electrode, the seventh electrode being electrically connected to the voltage applying line (C), the eighth electrode being electrically connected to the third electrode (D of 31) to receive the data signal.

With respect to claim 30, Okuda discloses, in Fig. 7, the voltage applying line (C) being in parallel to the data line (Bn).



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With respect to claim 31, Okuda discloses, in Fig. 10, the voltage applying line (C) being in parallel to the scan line (Ai).

*Allowable Subject Matter*

4. Claims 1-28 are presently allowed.
5. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter:

The cited art of record fails to teach a light-emitting panel comprising a voltage applying line applying potential difference wherein the voltage applying line satisfies a following condition:

$$\frac{V(\max)}{n} < A \frac{\Delta VData}{GS} [\text{Volts}]$$

wherein AVmax is a maximum voltage drop, 'n' is a number of pixels that are electrically connected to the voltage applying line, 'A' is a correction coefficient that is in a range from about 1 to about 4,  $\Delta vdata$  is a voltage difference between the gray scales, and GS is a number of gray scale as defined in claims 1 and 15, or

the voltage applying line satisfies a following condition:

$$\frac{Lv}{P(\text{White})} < \frac{(A \frac{\Delta VData}{GS}) - 0.00001}{0.5n / 2300}$$

wherein Lv is a electrical resistance of the voltage applying line between the pixels, P(White) is a electrical resistance of the light -emitting device emitting white light as defined in claims 8 and 22, or the voltage applying line comprising a first layer and a second layer, the first layer



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comprising an aluminum-neodymium (AlNd), a thickness of the first layer being in a range from about 3,000Å to about 6,000Å, the second layer comprising a molybdenum-tungsten (MoW), a thickness of the second layer being about 500Å as defined in claim 32.

*Response to the arguments*

7. With respect to claim 29, Applicant argues that Okuda does not disclose “a voltage applying line applying potential difference, the voltage applying line having first and second ends, the first and second ends being electrically connected to the power supplying part, wherein power is supplied through the first and the second ends. The Examiner respectfully disagreed. Fig. 7 of Okuda clearly teaches “a voltage applying line (C) applying potential difference voltage, the voltage applying line having first and second ends (two ends of power supply line C), the first and second ends being electrically connected to the power supplying part (28), wherein power is supplied through the first and the second ends”. Therefore, the rejection of claim 29 is proper.

With respect to the rejections of dependent claims 30-31 which employ the additional teaching of Okuda, Applicant has not offered any specific argument thereagainst. Accordingly, no further comments concerning the rejections of the dependent claims are necessary.

*Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until



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after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Inquiry***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Art unit 2821*

*Trinh Vo Dinh  
September 20, 2004*

  
**Don Wong**  
**Supervisory Patent Examiner**  
**Technology Center 2800**